Architecture of Grammar, day 3

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Effability & Economy

Can any conceptual representation that can be articulated in one language also articulated in another if the basic concepts are expressible in both languages?

Counterexamples: Paradigm gaps

(1) a. Der wievielte Tag des Monats ist heute? (GERMAN)
the how-many-th Tag des Monats is today

b. *The how manyth day of the month is (it) today?

c. Which day of the month is today?

(2) *forgoed / *forwent

But semantic and syntactic conditions exhibit more flexibility.

cases: Scope and Binding Economy (Fox 2000)

Wide scope blocked first, then becomes available:

(3) Some boy admires every teacher. Every girl does too.
($\exists \gg \forall, *\forall \gg \exists$)

(4) Some boy admires every teacher. Some girl does too.
($\exists \gg \forall, \forall \gg \exists$)

Long binding blocked first, then becomes available:

(5) a. John said that he likes his mother. Bill does too.
b. **Bill said that John likes Bill's mother.*

(6) a. John said that Mike likes his mother. Bill does too.
b. *Bill said that Mike likes Bill's mother.*

cases: Superiority and Weak Crossover

Pesetsky (1987): Object over subject blocked first, then becomes available.

(7) a. Who invited who?
b. *Who did who invite?

(8) a. Which girl invited which boy?
b. Which boy did which girl invite?

Accounting for effability

Y-model:

- requires look-ahead to meaning

Meaning first model:

- preference for economical conceptual representations
- closely related to exhaustification

Binding Economy

Longer dependencies are less economical:

(14) [[**the 'J**] [λ_x [**@** [x [**said** [**he**$_x$ [λ_y [y [**like** [**the** [**his**$_y$ **mother**]]]]]]]]]]]

(15) *[[**the 'J**] [λ_x [**@** [x [**said** [**he**$_x$ [**like** [**the** [**his**$_x$ **mother**]]]]]]]]]

Relevant alternatives of p for economy calculation are structures q with:

- q must have same meaning as p
- q must only contain the same atoms p contains
- q can have a different pronunciation for p (contra Fox 1998)

Only the most economical structure (i.e. lowest dependency complexity) is licit.

Scope Economy

Fox (1998): lowering of the raised subject for narrow scope

(9) a. [[every girl] λ_x [[every teacher] λ_y [x [likes y]]]
b. [[every teacher] λ_y [[every girl] [likes y]]]]

Sauerland (2018): representations different

(19) a. [[**every girl**] [λ_x [[**every teacher**] [λ_y [**@** [x [**admire** y]]]]]]]
b. *[[**every teacher**] [λ_y [[**every girl**] [λ_x [**@** [x [**admire** y]]]]]]]

Dependency length exponentially contributes to complexity.

(10) *Dependency Complexity (DC)* Let var(**A**) be the set of occurrences of bound[6] variables in A and len(x) be the number of complex concept units between a single occurrence $x \in$ var(**A**) and its binder λ_x within **A**. Then we define the dependency complexity of **A** as:

$$\mathrm{DC}(\mathbf{A}) = \sum_{x \in \mathrm{var}(\mathbf{A})} 2^{\mathrm{len}(x)}$$

Account of superiority

(10) a. Which girl invited which boy?
b. Which boy did which girl invite?

Singular *which* has uniqueness presupposition, who doesn't:

(11) a. Which girl invited the teacher? – Mary / #None of them / Mary and Sue.
b. Who invited the teacher? – Mary / No one / Mary and Sue.

The uniqueness presuppositions project differently in (10a) and (10b):

(12) a. Each girl invited exactly one boy.
b. Each boy invited exactly one girl.

(24)

a.	Abe	Ben	Cid
Ann		*	
Bea		*	
Cel	*		

b.	Abe	Ben	Cid
Ann			
Bea		*	*
Cel	*		

c.	Abe	Ben	Cid
Ann		*	
Bea		*	*
Cel			